DRAFT SOW SECTION E

FOR

JOINT LIGHT TACTICAL VEHICLES (JLTV)

VERSION 1.0

(Changes made since TD phase SOW have been highlighted in blue)

9TH JUNE 2010

SECTION E - INSPECTION AND ACCEPTANCE

52.246-X (TBD by contracting at time of contract award)
52.246-11 Higher-Level Contract Quality Requirement FEB/1999

TEST, ANALYSIS, AND INSPECTION PROGRAM

1 VEHICLE INSPECTION OVERVIEW

The Contractor shall conduct inspections and tests for all deliverables listed in Table E.1 (TBD), to be presented for Government testing, prior to delivery to Government test facilities.
The Contractor shall plan and conduct inspections, certifications, analyses, and tests to determine vehicle conformance to the JLTV Purchase Description (PD) requirements.

1.1 EMD Acceptance Test (AT)

Acceptance Testing (AT) of the vehicles, with companion trailers, shall be conducted by the contractor at the contractor' facility and witnessed by the Government.
The AT shall consist of those performance and safety characteristics identified in Table (TBD) which will be agreed upon and approved by the JLTV T&E IPT.
The AT should also include a minimum of (TBD) shakedown miles on the vehicles and (TBD) shakedown miles on the trailers.
Any failures occurring during AT shall be corrected by the contractor at the contractor's facility, and approved by the T&E IPT and verified by DCMA, prior to acceptance by the Government or any follow-on testing.

1.2 Vehicle Test and Inspection Plan (V-TIP)

The Contractor shall develop the Vehicle Test and Inspection Plan (V-TIP) to include trailer, that will outline scheduling of all events required to conduct the Component/Subsystem Test (C/ST), Shakedown Test (ST) and Vehicle Inspection (VI).
The Contractor shall deliver the Plan (TBD).
The V-TIP shall include, at a minimum, the inspections identified in Table (TBD).
The final V-TIP shall be provided at CDR. Any deviations from the final V-TIP shall require Government approval.

1.3 Vehicle Inspection Record (VIR)

1.3.1

The Contractor shall prepare a Vehicle Inspection Record (VIR) in Contractor format for each deliverable sub configuration vehicle and trailer.
The Component / Subsystem Tests (C/ST), Shakedown Test (ST) results, and the Vehicle Inspections (VI) shall be incorporated into the Vehicle Inspection Record (VIR).

The VIR shall be organized to be compatible with assemblies, installation, and end item performance and acceptance.
The VIR shall list each characteristic or function inspected or tested, and the relationship to the contract requirement.
The VIR shall contain all examinations and tests performed on each vehicle during assembly and Contractor's acceptance inspections.
Results obtained from the testing shall be detailed in the VIR.

1.3.2

Deficiencies discovered during inspection and tests and corrective actions taken by the Contractor shall be documented in the VIR.

1.3.3

All Contractor assembly and inspection documents and certifications required to validate work completed and product quality shall have an indication of acceptance in the VIR.
Copies of all documents and certifications shall be included in the VIR.
The documentation and certifications shall be provided for review and acceptance at least seven (7) days prior to the Pre Test Readiness Review (pre-TRR).

1.3.4

The Contractor shall notify the Government of inspections and tests in sufficient time three (3) days prior to starting, to allow the Government to make travel arrangements to witness the inspections and tests.
No final vehicle inspections shall be conducted prior to the conclusion of all component testing, shakedown testing, and internal vendor inspections.

1.3.5

The Contractor shall be required to repeat any or all the inspections or tests reported as defective in the VIR (C/ST, ST or VI).
Upon completion of additional Contractor re-inspections, an updated inspection record shall be submitted to the Government for review.
All discrepancies found during, and indentified in, the VIR shall be corrected on the vehicles prior to start of Government testing.
The Contractor shall request a waiver for any deviation of fault found on the VIR.

1.3.6

The Contractor shall deliver certifications in Contractor format, of those requirements designated in the JLTV Purchase Description as Certification seven (7) days prior to the Pre Test Readiness Review (pre-TRR).

1.4 Component/Subsystem Testing (C/ST)

The Contractor shall provide the results of all Contractor component/subsystem level testing (7) days prior to the Pre Test Readiness Review (pre-TRR) and recorded in the Vehicle Inspection Record (VIR).

1.5 Shakedown Test (SDT)

A Shakedown test shall be completed by the Contractor prior to the Pre Test Readiness Review (pre-TRR) to ensure that the vehicles and companion trailers are ready for Government testing.
The Contractor's SDT shall include an evaluation of safe operation of the vehicle and trailer, to include all testing identified in Table (TBD).
Any safety issues identified during SDT shall be incorporated in the System Safety Analysis Report (SAR).
At the request of the Government, Contractor shall make available for review the results of the V-TIP and all certifications required by the Purchase Description.
The final results for all vehicle and trailer Shakedown Tests shall be provided to the Government seven (7) days prior to the Pre Test Readiness Review (pre-TRR) and incorporated into the VIR.

1.6 Field Service Representative (FSR) for Testing

Contractor shall provide personnel at all test sites to maintain and repair the prototype test vehicles and address other vehicle issues during Government testing.
The Contractor FSR shall be available to assist the Government test personnel and provide guidance on other vehicle issues during the entire Government test workday.
The test workday shall consist of (1) shift of ten (10) hours per day, five (5) days per week (Base Schedule).

Option 1: second shift of ten (10) hours per day, five (5) days a week for maintenance and/or additional testing shall be planned.
Option 2: two shifts ten (10) hours a day for six (6) days a week for maintenance and/or additional testing shall be planned.

1.7 Vehicle Configuration Control

The Contractor shall identify in writing, any components on the vehicles delivered to Government test sites which differ from that of the design at Pre Test Readiness Review (pre-TRR) and the rationale for the change.
In the event any changes occur after TRR and before Government acceptance the government may at its election require a follow-on TRR.
Any components replaced during Government testing that are not the same as the component it is replacing, is to be considered a change.
Vehicle changes made once testing has begun are to be coordinated with the PM Test POC prior to installation on the vehicle.
When directed by the Government the Contractor shall install the same change on all similarly configured vehicles.
Any changes to the design or materials of the vehicles could result in re-testing at the discretion of the Government.

1.8 Test Asset Delivery

The test assets and all Government Furnished Property (GFP) shall be delivered to the Government test site(s) listed in Section F and Table E.1 Transportation charges from the Contractor's plant to and from the test sites (to and from secondary test sites as required of Section E and F) shall be the sole responsibility of the Contractor.
Under no circumstances shall any test asset be shipped from the Contractor's facility to the test sites until after Government acceptance.
Table E 1. Specific vehicle delivery requirements for the Engineering and Manufacturing Development (EMD) Testing are listed per the table below.

<Table E.1 (TBD) >

Table is TBD. Rough estimation of vehicles is 30-40 spread across the sub-configurations listed in Section C.1.1.

2 JLTV ENGINEERING AND MANUFACTURING DEVELOPMENT (EMD) TEST VEHICLE REQUIREMENTS

2.1 Government Test Overview

The Engineering and Manufacturing Development Test (EMDT) will be conducted by the Government per the Purchase Description at Government designated test sites.
The EMDT schedule will be discussed during the Start of Work meeting and subsequent Test and Evaluation IPT meetings.

2.1.1 Performance Test

Performance testing will be conducted (IAW PD Section 4) at Aberdeen Test Center (ATC), Aberdeen Proving Ground (APG) unless otherwise specified.
Sealift demonstrations will be conducted at Blount Island Command (BIC), FL and Norfolk Naval Base, VA.
Joint Interoperability Testing will be conducted at Naval Surface Warfare Center, Indian Head MD Test facility.

2.1.2 Ballistic Test

Ballistic (Coupons, Hulls, and Vehicle) testing will be conducted by ATC and the U.S. Army Research Laboratory (ARL), Weapons and Materials Research Directorate (WMRD) at APG. Hull and Vehicle numbers required for testing are listed in Table E 1.
At the discretion of the Government, coupons may be tested at other Government facilities (i.e. TACOM).
The prototype system level Live Fire testing will be performed on one vehicle from each payload category upon completion of its performance testing.

2.1.3 Reliability and Maintainability (R&M) Test

Reliability and Maintainability (R&M) testing will be conducted at Yuma Test Center (YTC), Yuma, AZ, for 25,000 miles per vehicle.
The vehicles will be evaluated while operating under varying payloads with and without B-armor kit as specified in the Operational Mode Summary/Mission Profile (OMS/MP).

2.1.4 Limited User Test (LUT)

The Limited User Test (LUT) will be conducted at in a field environment (to be specified) using performance vehicles at a location determined by the Operational Test Agency (OTA), and performed within the constraints specified by the DTC Safety Release.

2.1.5 Contractor Support Facilities at Test Sites

At APG and YPG test sites the Government will provide the Contractor limited office space and maintenance facilities at each test site.
Office space will be furnished with two (2) desks, two (2) phones lines, and storage area for one (1) twenty (20) foot Connex storage unit (Contractor supplied).
If space for additional Connex boxes is required, the Contractor will negotiate directly with the Test Centers. These office facilities will be provided from 7 days prior to vehicle delivery through the end of testing.
If additional facilities are required by the Contractor, those facilities shall be supplied by and are the responsibility of the Contractor.

2.2 Armor Testing

2.2.1 Armor Coupon Sets

Transparent and Opaque armor coupons shall be delivered as armor coupon sets.
An armor coupon set, is defined as the number of test coupons required for each unique armor solution that meets a required level of protection (Purchase Description, Main Body and Annex E).
Different recipes constitute a unique solution such as solutions for frontal, flank, rear, underbody, and roof armor design components shall include Gunners Protection Kit (GPK).
At the Government's discretion the Contractor shall not required to deliver coupons for any solution previously qualified by the Government that meets the required JLTV FoV level of protection (Annex E).
All coupons shall be labeled as to the designated vehicle configuration location (i.e. flank, underbody, etc.) and attack/strike side.

2.2.1.1 Transparent Armor (TA)

One (1) set of each TA unique solution shall consist of twelve (12) coupons. Each TA coupon shall be 15.75" by 15.75" in size.
If a proposed TA component configuration is smaller dimensionally than the coupon requirement, the coupon set shall then be delivered to the approximate dimensions proposed and shall include its designed frame and its testing mount.

2.2.1.2 Opaque Armor (OA)

One (1) set A structure (base vehicle) plus B-Armor kit OA solution shall consist of eight (8) coupons. Additionally, one (1) set of payload category B, A-structure OA solution is required and shall consist of three (3) coupons.
Opaque Armor coupons as a minimum shall be 24" by 24" in size.
If an armor solution has a composite backing, it is required that the composite be 24" by 24" in size and centered on a 30" by 30" coupon.

2.2.1.3 EFP Coupons

If the Contractor proposes an EFP solution other than that furnished by the Government, one (1) set of Contractor's EFP solution shall consist of ten (10) coupons.
The coupons shall be 18" by 18" in size.

2.2.1.4

Any necessary mounting hardware shall be included by the Contractor for all armor design components delivered.

2.2.2 Armor Hulls for Government Testing

As part of the Government testing, the Contractor shall submit their JLTV A structure (base vehicle) plus B-Armor kit hulls designed for side and underbelly blast and fragment testing.
The Contractor shall deliver hulls, kits, and any spall suppression panels and/or curtains that are to be included in the design for crew protection.
The hulls shall be configured without suspension, drive train, or interior components (i.e. seats, dash board, etc.).
Test stands for each armored hull shall be delivered with the hull.

2.2.3 Deliverable Vehicles for Government Testing

Vehicles will be delivered with A-structure and B-kit armor, to include spall protection systems (if included in overall protection requirements).
Prototype system level live fire testing will be performed on one vehicle from each payload category, and the remaining vehicles require B-kit and spall suppression systems in order to be performance tested at GVW.

3 TEST DEFICIENCIES/FAILURE

3.1 Definition of "Defect"

A defect is defined as any condition or characteristic in any supply or service furnished by the contractor under the contract that is not in compliance with the requirements of the contract or non-compliance to a technical requirement. Defects are classified as "Critical", "Major", or "Minor".
The contractor shall respond to Test Incident Reports (TIRs) as directed per (TBD) "TIR Response Time", relating to defects submitted and verify all corrective actions with retesting, as determined by the T&E IPT.

3.2 Corrective Actions

The contractor shall be responsible for the maintenance, repair and replacement of any non-Government Furnished Property (GFP) parts/subsystems/Line Replaceable Units (LRU) which fail to satisfactorily perform during test.
The contractor shall provide an analysis of all failures as directed by the Government.

3.2.1 TIR Response Time

The TIRs that require responses, per COR direction shall be responded to within the following time frames (based on TIR rating):

3.2.1.1 Critical

- Telephonically within twenty-four (24) hours
- Interim response (electronic) within five (5) work days of COR notification
- Final response (electronic) within thirty (30) work days of COR notification

3.2.1.2 Major

- Interim response (electronic) within five (5) work days of COR notification
- Final response (electronic) within thirty (30) work days of COR notification

3.2.1.3 Minor

- Interim response (electronic) within ten (10) work days of COR notification
- Final response (electronic) within thirty (30) work days of COR notification

3.2.2

The Contractor shall be responsible for accessing VDLS [VISION (Versatile Information Systems Integrated On-line Nationwide) Digital Library System] (https://vdls.atc.army.mil) for all Test Incident Reports (TIRs) released during Government-required tests.
A list of Contractor personnel requiring VDLS access shall be provided to the Government thirty (30) days prior to the Test Readiness Review (TRR).
Requirements for access to VDLS shall be provided at the start of work meeting. Receipt of a TIR is defined as the TIR Release Date.
The Government shall notify the Contractor, in writing, of the TIRs which require a written response.

Upon receipt the notification that a response is required, the Contractor's response shall include, at a minimum, the root cause of the incident, the technical approach to resolving the issue, and a course or action set forth in this contract provision.
The response shall be in the form of a Failure Analysis and Corrective Action Report (FACAR). The FACAR data stream shall be prepared by the Contractor in the ASCII format for Corrective Action data streams.

3.2.3

The VDLS system shall not be utilized for the posting of any Ballistic or classified TIRs.

3.3

For those incidents requiring a response, no Contractor entries are required in data blocks 102, 103, 104, and 105 of the TIR.
The first Contractor entry for each FACAR shall record OPEN in data block 100. No subsequent changes should be made to data block 100. Responses to data blocks 120-123 shall also include the data identified in the data item description.

3.4

TIR Revisions shall include all previous FACAR submittals.
Each FACAR submittal shall begin with the current date, author, and most recent official CARB comment.

3.5 Identification of Test Assets.

For those TIRs which the Contractor corrects, the Contractor shall conspicuously mark, tag, and control each failed test exhibit received from the tester as it corresponds to its respective TIR.
All identification markings/tagging placed on a failed test exhibit by the testers shall be maintained with the exhibit.
Each failed test exhibit supporting the FACAR process shall not be handled in a manner that may obliterate facts which are viewed by the Government CARB as pertinent to the analysis.
The Contractor shall be fully responsible for the storage of each failed test exhibit (no matter where the storage facility is located) and the item(s) shall remain stored pending disposition of the failure analysis and Government CARB notification and approval.

3.6 Scoring Conferences/Corrective Action Review Board (CARB) Meetings

3.6.1 Scoring conference

Contractors shall support scoring conference meetings to present information, evidence, or opinions that the Government should consider when assessing corrective actions.
The Contractor will not attend the actual scoring of the TIRs.
The Contractor shall identify any deficiencies as a part of their failure analysis.

Deficiency is defined as a failure caused by a product deficiency, any interface related changes made to parts, components, assemblies or other items necessary to accommodate Contractor changes, and any test related modifications to Contractor changes from the date of proposal submission.
During and after Government testing, Scoring Conferences will be held to review and independently score Test Incident Reports (TIRs).

3.6.2 CARB Meetings

During and after Government testing, CARB meetings will be held to review the functional/performance failure data and corrective action status of TIRs which require a Contractor response.
The CARB meeting results should be consistent with scoring conference data.
The Contractor shall participate in all CARB meetings.

3.6.2.1 Schedules

Government will provide official notification on all CARB Meeting schedules at the inception of each test project.

3.6.2.2 CARB Preparation/Notification

The Contractor shall provide an electronic CARB Meeting agenda prior to all CARB meetings.
It shall contain at a minimum the following information: TIR, Revision #, Date Occurred, Original Release Date, Release Date, Title/Maintenance Description, Mileage, Subsystem, Incident Class, and Chargeability.
Official CARB meeting minutes shall be provided by the Contractor.

4 INSPECTION AND TEST EQUIPMENT

4.1

Except as otherwise expressly provided for under this contract, the Contractor shall be responsible for the supply and maintenance of all inspection and test equipment necessary to fabricate Vehicles and assure that end item components conform to contract requirements.
The Government shall not furnish any inspection equipment for this contract.

4.2

The Contractor shall make inspection equipment available to the Government Inspector during Government in-process or end item inspection.
Upon completion of the inspection by the Government Inspector, all inspection equipment shall be returned to the Contractor.

5 QUALITY MANAGEMENT

The contractor shall provide evidence of a Quality Management System.
The contractor shall provide copies of certificate(s) of registration or certification(s) of compliance to a recognized quality management standard and a copy of their documented procedures for review by the Government.
The contractor shall implement and maintain the Quality Management System throughout the life of the contract.